

Claims 3, 8-10, 12-14, 16, 18 and 19 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention and specie, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on February 17, 2010. Claims 9, 10, 12-14, 16, 18 and 19 are directed to the method of making a flexible tube head. Claims 3 and 8 are directed to non-elected species.

Previously, claim 8 was stated to be a generic claim. It is now realized that claim 8 requires that the material that is melt-compatible with the plastic material of the tube head is located on the shoulder of the tube head. The melt-compatible material is part of the support of the electronic component. Therefore, Fig. 6 represents the configuration discussed in claim 8 not elected Specie A: electronic component set within the cap (claim 2).

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites the limitation "the support" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Applicant's claim terminology is broadly interpreted. "Tube head" generally represents the top neck finish area and shoulder of a bottle as shown in Fig. 3 and 6 and labeled as reference number 40. "Tube head" must be broadly interpreted to include closures as claim 2 includes a pivoting cap as part of the tube head. The term "skirt" generally represents the cylindrical

sidewall that extends below the shoulder of a bottle. "Tube" refers to the combined assembly of a tube head and a skirt as stated in claim 15.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 15 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Carr et al. (2002/0183883) (Carr).

Carr discloses in Fig. 1 a plastic closure and associated container (see page 3, paragraph [0020]) which defines a flexible tube head formed of plastic material, the tube head including an opening by an edge and a shoulder connecting the edge to a flexible skirt of a flexible tube for packaging a product, the tube head includes an RFID electronic component (integrated circuit 16 and antenna 18) in the cap (plastic closure 12), the component is intended to exchange information about the tube and/or its contents with a read/write device (radio frequency input/output device 20) outside of the tube without any electrical contact, the electronic component being set within the plastic material such that there is no adhesive material in contact with the packaged product (see paragraph [0026], specifically, last three sentences which pertain to (1) the secured within the closure during molding (2) the heat bonding such as by ultrasonic welding and the use of a suitable heat-bondable substrate and (3) mechanical attachment wherein all three attachment mechanisms do not use adhesive).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carr in view of Hermes (FR 2622543).

Carr discloses that the electronic component is set within the plastic material forming a cap. However, Carr's cap is not a pivoting cap. Hermes teaches a pivoting cap on a bottle. It would have been obvious to modify the cap of Carr to be a pivoting cap to provide convenience and ease in aligning and securing a cap in a closed position and insuring that the cap seals properly. Also, the cap is not detached in the open position which eliminates the possibility of a cap being misplaced from an open bottle.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carr in view of Panasik (6087198).

Carr discloses the invention except for the thickness of the electronic component being less than 400 microns. Panasik teaches an electronic component (integrated circuit chip) of between 2-4 microns in thickness. It would have been obvious to modify the size and thickness of the electronic component to be less than 400 microns to reduce power requirements, to reduce the possibility that the electronic component is noticed, and to reduce any adverse affect a larger component would have on the moldability of the bottle/cap and the structural integrity of the bottle/cap.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carr in view of Kennedy (3778685).

Carr discloses the invention except for the electronic component doesn't have a support and the periphery of the support enclosed by the plastic material forming the tube head. Carr states that preferably the radio frequency (RF) integrated circuit 16 is disposed on or at the interior surface of the closure (see paragraph [0025], lines 3 and 4). Carr further states two methods of attachment of the circuit 16 and antenna 18 (see paragraph [0026]). First, heat bonding by disposition of the circuit and antenna on a suitable heat bondable substrate. The substrate is a support. However, the heat bonding doesn't state that the periphery of the substrate is enclosed in the plastic material forming a cap. Second, the circuit and antenna can be positioned and secured within the closure during molding thereof. This second method of attachment doesn't mention a support. The second method would not preclude an enclosing of the electronic component in the plastic material forming the cap.

Kennedy teaches an electronic component (integrated circuit) which includes a support (potting compound 13), the support has a periphery, and the support is enclosed in the plastic material of molded cover 14. It would have been obvious that Carr could be made by attaching the circuit and antenna to a substrate or support then enclosing the support in the plastic material forming a cap in order to securely mount the electronic component and protect the electronic component from damage or exposure to liquid.

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carr in view of Kennedy as applied to claim 5 above, and further in view of Cutler et al. (5944206) (Culter) and Fredricks et al. (6129653) (Fredricks).

The combination discloses the invention except for showing that the support material is melt-compatible with the plastic material forming the tube head. Culter teaches a bottle made from low density polyethylene (LDPE). Fredricks teaches and discusses a comparison between the melt temperature of low density polyethylene (LDPE) at 105 degrees C and a higher melt temperature of high density polyethylene (HDPE) at 130 degrees C.

Melt-compatibility is not thoroughly explained in paragraph [0026] of applicant's specification. However, applicant mentions that high density polyethylene (HDPE) or a polypropylene is used for the support material. It is believed that HDPE with its higher melt temperature makes HDPE melt-compatible when welded or molded with lower melting point plastics such as LDPE because the support will not melt, deform or become degraded during a molding process where molten LDPE flows at a temperature higher than 105 degrees C but lower than 130 degree C which doesn't adversely affect the HDPE of the support. The skilled artisan, a chemical engineer or a mechanical engineer with a background in flow mechanics of plastic materials, would have known and understood this important relation of plastic materials with different melt points and how to use a lower melting point material to enclose a higher melting point (melt-compatible) material when molding with the lower melting point material.

It would have been obvious to modify the combination by using a HDPE plastic support material with a LDPE plastic material to form the cap and tube head in order to allow fast, reliable and easy attachment of the support with circuit and antenna to the formed tube head and cap when forming the tube head and cap. The HDPE plastic support material is a melt-compatible with the plastic material forming the tube head and cap.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to /Stephen J. Castellano/ whose telephone number is 571-272-4535. The examiner can normally be reached on increased flexibility plan (IFP).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony D. Stashick can be reached on 571-272-4561. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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